

REMARKS

I. Summary of Office Action

Claims 1-50 are pending in the application.

The Examiner rejected claims 44-50 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1-8, 12-23, and 28-50 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Bosack U.S. Patent No. 5,088,032 (hereinafter, "Bosack").

The Examiner rejected claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Bosack in view of Stern U.S. Patent No. 5,191,626 (hereinafter, "Stern").

Claim 24 was rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Bosack.

The Examiner rejected claims 25-27 under 35 U.S.C. § 103(a) as being unpatentable over Bosack in view of Rekhter et al. U.S. Patent No. 6,526,056 (hereinafter, "Rekhter").

II. Summary of Applicants' Reply

Amendments to the drawings have been proposed by applicants in order to correct certain typographical errors. No new matter would be added by these amendments to the specification and drawings.

Amendments to claims 1, 28, 39, and 44 have been proposed by applicants in order more particular define the present invention as recited in claim 1 and to correct grammatical errors in claims 28 and 39. No new matter has been added by these amendments to the claims.

The Examiner's rejections under 35 U.S.C. §§ 102(b) and 103(a) are respectfully traversed by applicants.

Reconsideration of this application is respectfully requested.

III. The Amendments to the Claims

Applicants have recently discovered grammatical errors in claims 28 and 39. The proposed amendments to these claims are intended to correct these grammatical errors. In particular, applicants have proposed amending claims 28 and 39 to change "an network" to "a network" in both of these claims. No new matter would be added by the proposed amendments

to claims 28 and 39. Accordingly, applicants respectfully request entry by the Examiner of the proposed amendments to claims 28 and 39.

Moreover, applicants have proposed amending claims 1 and 44 in order to more particularly define the invention. The proposed amendments to claims 1 and 44 also would not add any new matter, and are fully supported and justified by the specification and drawings as originally filed (*see, e.g.*, paragraphs 43-48 and FIG. 3 of applicants' originally filed specification). Accordingly, applicants respectfully request entry by the Examiner of the proposed amendments to claims 1 and 44.

IV. The Rejection of Claims 44-50 Under 35 U.S.C. § 112

Claims 44-50 were rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The Examiner's rejection of claims 44-50 under this section is respectfully traversed.

In rejecting claims 44-50 under this section, the Examiner argued that the claim language of claim 44, which recites "each coordinate label representing a complete path from said Node to a particular other, non-adjacent Node of said network," is contradicted by FIG. 3, which shows "a node adjacent to the root node [that] comprises a coordinate label, which includes the path from the root node to the adjacent node" (Office Action, page 2).

Applicants respectfully disagree with the Examiner's contention that the claim language of claim 44 is contradicted by FIG. 3. In particular, applicants note that, while claim 44 as previously amended in applicants' Reply to Office Action that was mailed on May 17, 2005 recites that each coordinate label represents a path to a non-adjacent Node, nowhere in this claim it is precluded that other (unclaimed) coordinate labels be present that may represent a path, for example, to an adjacent Node. Nevertheless, in order to expedite prosecution of the present application, applicants have proposed amending claim 44 to change "each coordinate label representing a complete path..." to "at least one of said one or more coordinate labels representing a complete path...."

In light of the foregoing, applicants respectfully request that the rejection of claims 44-50 under 35 U.S.C. § 112, second paragraph be withdrawn by the Examiner.

V. The Rejection of Independent Claims 1, 33, and 44 Under 35 U.S.C. § 102(b)

Each of the pending independent claims 1, 33, and 44 was rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Bosack. The Examiner's rejection of independent claims 1, 33, and 44 is respectfully traversed.

Applicants respectfully submit that each of independent claims 1, 33, and 44 are allowable for at least the reasons set forth below.

A. Introduction

In the Office Action, the Examiner suggests that Bosack's gateways are the same as applicants' claimed Nodes to which paths are determined. For example, in asserting that Bosack discloses the determination of paths between Nodes as recited in applicants' independent claims, on page 3 of the Office Action, the Examiner referred to "paths between the gateway and destination gateways." However, even assuming *arguendo* that Bosack's gateways are destinations as asserted by the Examiner, Bosack does not anticipate any of independent claims 1, 33, and 44.

B. The Bosack Reference

Bosack relates to a method and apparatus for routing data transmissions among computer networks with the use of gateway circuits ("gateways"). As described in Bosack, *e.g.*, at column 1, line 60 to column 2, line 38 and column 4, lines 10-42, each gateway learns all the destinations that can be reached through it (*see, e.g.*, Bosack's Table 1 located at column 5, lines 1-15, which lists "N" number of different destinations reachable by a particular gateway, and the possible "next hops" to reach the different destinations). When a first gateway in Bosack receives data whose identified destination is a non-adjacent gateway, the first gateway simply selects a suitable next hop gateway based on the known destination. Nowhere in Bosack is it disclosed or suggested that the first gateway determines or knows the entire path to reach the non-adjacent destination gateway. On the contrary, once a subsequent gateway in a data transmission path receives data, it is that subsequent gateway which determines the following next hop, not the preceding gateway from which it received the data. For example, referring to FIG. 2 of Bosack, when gateway 108 receives data to be transmitted to a computer in network 84 (via gateway 102), gateway 108 will not know (or be able to control) the entire route to reach

network 84 or gateway 102. Rather, gateway 108 will simply send the data to a chosen one of gateways 104, 106, and 76 (*i.e.*, the next hop gateway chosen by gateway 108), and it is up to the chosen next hop gateway to determine the subsequent next hop to reach the destination (in this case, a computer in network 84).

C. Independent Claim 1 Is Allowable Over Bosack

Applicants independent claim 1 relates to a circuit based network that includes a plurality of Nodes interconnected by Links. As proposed, independent claim 1 includes the following features:

each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes;

each coordinate label is unique to the Node to which it is assigned;

a path between a first Node and a second, non-adjacent Node being determined by said first Node from one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node, said determined path comprising a Link connecting a third Node and said second Node; and

said network is configured according to said path.

In arguing that Bosack discloses determining a path as claimed by applicants, the Examiner stated that “paths between the gateway and destination gateways [in Bosack] are compiled based on the description of each data link between the gateway and destination” gateways (Office Action, page 3, lines 12-14, and Office Action, page 13, lines 19-20).

Even assuming *arguendo* that the above assertion is correct and that data link descriptions are a type of “coordinate label” as claimed by applicants, which applicants assert is not the case, Bosack still does not disclose using data link descriptions to determine, by a first Node, a path between the first Node and a second, non-adjacent Node that includes “a Link connecting a third Node and [the] second Node,” as recited in claim 1. On the contrary, data link information as described throughout Bosack is used by a gateway solely to determine the next hop gateway in a data transmission. For example, in column 4, lines 36-37, Bosack explains that the paths computed by a gateway “are defined simply by the next hop.” The fact that gateways in Bosack merely determine the next hop in a data transmission, and not any Link beyond the next hop, is also clear from the description in Bosack. For example, with regard to the different possible paths in Bosack’s FIG. 2 that may be used to connect gateway 76 to network 88, Bosack explains

that “routes involving links 121 and 122 both go through gateway 108,” but that gateway 76 “need not choose between them, leaving the choice to gateway 108” (Bosack, column 4, lines 39-42, emphasis added). Nowhere does Bosack disclose that a first Node or gateway is able to determine a path beyond the next hop in a data transmission path towards a non-adjacent second Node or gateway.

Accordingly, Bosack does not disclose determining a path between first and second non-adjacent Nodes by the first Node, where the path that has been determined by the first Node includes “a Link connecting a third Node and said second Node,” as recited in claim 1.

For at least the foregoing reasons, applicants respectfully request that the rejection of claim 1, and claims 2-32 which depend from claim 1, be withdrawn by the Examiner.

D. Independent Claim 33 Is Allowable Over Bosack

Generally speaking, applicants’ invention as defined by independent claim 33 relates to a method for determining a path from a source Node to a destination Node in a circuits based network. In particular, as defined by claim 33, the method requires performing each of the following steps (emphasis added):

Applicants’ independent claim 33 relates to a method for determining a path from a source Node to a destination Node in a network. Independent claim 33 includes the following features (emphasis added):

assigning to each of said second Nodes, including said source Node and said destination Node, one or more coordinate labels, each coordinate label assigned to a second Node representing a path through said network from said second Node to [a] first Node;

determining a path from said source Node to said destination Node by combining one coordinate label of said source Node and one coordinate label of said destination Node; and

configuring said network according to said path.

Accordingly, it is clear that applicants’ claim 33 requires that a coordinate label of the destination Node be used in determining a path to that destination Node. However, as described throughout Bosack, the link descriptions (or metrics) in Bosack are used solely for outbound connections (to the next hop gateway in a data transmission). Nowhere does Bosack show or suggest that any gateway is assigned a link description that is used to determine a path to that

gateway, rather than away from that gateway to a next hop. Thus, even if a link description was a coordinate label and was assigned to a destination gateway or Node, such a link description would not be combined with any other link description or coordinate label for the purpose of determining a path to that destination gateway or Node, as required by claim 33.

Accordingly, Bosack does not disclose determining a path between a source Node and a destination Node by combining a coordinate label of the source Node and a coordinate label of the destination Node, as recited in claim 33.

Moreover, applicants respectfully submit that the Examiner erred in failing to address independent claim 33 apart from claim 1 (or, at least, provide reasons why the limitations found in claim 33 but not in claim 1 are believed to be shown or suggested by Bosack). For example, a system covered by claim 33 may be one in which a path between Node A and Node B is determined by combining the following two: (1) a coordinate label of Node A that represents a path from Node A to a different Node Z, and (2) a coordinate label of Node B that represents a path from Node B also to Node Z. Bosack does not show or suggest combining coordinate labels that represent respective paths from source and destination Nodes to the same different Node, as recited in claim 33, nor has the Examiner even suggested that it does.

For at least the foregoing reasons, applicants respectfully request that the rejection of claim 33, and claims 34-43 which depend from claim 33, be withdrawn by the Examiner.

E. Independent Claim 44 Is Allowable Over Bosack

Applicants' independent claim 44, as proposed, relates to a Node for use in a circuits based network. According to independent claim 44, the Node "has one or more coordinate labels assigned thereto, at least one of said one or more coordinate labels representing a complete path from said Node to a particular other, non adjacent Node" (emphasis added). Moreover, as proposed, amended claim 44 also recite that "said Node determines a complete path from said Node to a non-adjacent destination Node from a particular one of the one or more coordinate labels."

Unlike the claimed invention, nowhere in Bosack is it shown or suggested that a Node is assigned one or more coordinate labels, where one or more of these coordinate labels represent a complete path from that Node to a non-adjacent Node, and where the "Node determines a complete path from said Node to a non-adjacent destination Node from a particular one of the

one or more coordinate labels” (claim 44). This is apparent from Bosack’s consistent explanation that, when a gateway in Bosack receives a data transmission that is destined for a non-adjacent node, the gateway merely selects the next hop gateway (*e.g.*, based on its available data link descriptions) in the path. For example, at column 1, line 67 through column 2, line 2, Bosack explains that gateways store the identity of the next hop gateway and metric information concerning the path to this next hop. Similarly, at column 4, lines 30-42, Bosack explains that gateways determine the desirability of all the links to adjacent gateways that it may use to send a data transmission towards its destination. Moreover, while Table 1 of Bosack lists destinations reachable from a gateway, nowhere in Bosack, including the portions cited by the Examiner in the Office Action, does it show or suggest that gateways know the complete path to reach these destinations.

Accordingly, applicants respectfully request that the rejection of claim 44, and claims 45-50 which depend from claim 44, be withdrawn by the Examiner.

V. The Rejections of Dependent Claims 2-32, 34-43, and 45-50 Under 35 U.S.C. §§ 102(b) and 103(a)

The Examiner rejected each of dependent claims 2-8, 12-23, 28-32, 34-43, and 45-50 under 35 U.S.C. § 102(b) as being anticipated by Bosack. In addition, the Examiner rejected each of dependent claims 9-11 and 24-27 under 103(a) as being unpatentable over some combination of Bosack, Rekhter, and Stern.

Applicants respectfully submit that claims 2-8, 12-23, 28-32, 34-43, and 45-50, each of which depends from one of independent claims 1, 23, and 44, are allowable for at least the same reasons that the independent claims are patentable as set forth above. Therefore, applicants respectfully request that the Examiner withdraw the rejections of claims 2-8, 12-23, 28-32, 34-43, and 45-50.

VI. Petition For Extension Of Time

Applicants have submitted herewith a petition for a three-month extension of time for responding to the Office Action mailed on August 8, 2005. The Director is hereby authorized to charge any additional fees which may be required for this response, or credit any overpayment, to Deposit Account No. 08-0219.

VII. Conclusion

Applicants respectfully submit that, as described above, the cited references do not show or suggest the combination of features recited in the claims. Applicants do not concede that the cited references show any of the elements recited in the claims. However, applicants have provided specific examples of elements in the claims that are clearly not present in the cited prior art.

Applicants strongly emphasize that one reviewing the prosecution history should not interpret any of the examples applicants have described herein in connection with distinguishing over the prior art as limiting to those specific features in isolation. Rather, applicants assert that it is the combination of elements recited in each of the claims, when each claim is interpreted as a whole, which is patentable. Applicants has emphasized certain features in the claims as clearly not present in the cited references, as discussed above. However, applicants do not concede that other features in the claims are found in the prior art. Rather, for the sake of simplicity, applicant are providing examples of why the claims described above are distinguishable over the cited prior art.

Further, applicants hereby retract any arguments and/or statements made during prosecution that are rejected by the Examiner during prosecution and/or that are unnecessary to obtain allowance, and only maintain the arguments that persuade the Examiner with respect to the allowability of the patent claims, as one of ordinary skill would understand from a review of the prosecution history. That is, applicants specifically retract statements that one of ordinary skill would recognize from reading the file history as not necessary, not used and/or rejected by the Examiner in allowing the patent application.

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For at least the reasons set forth above, applicants respectfully submit that this application, as amended, is in condition for allowance. Reconsideration and prompt allowance of the application are respectfully requested.

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Respectfully submitted,

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